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# Tacit Knowledge Sharing for Individual Innovation Capability at Indonesian SMI

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Abstract

Knowledge sharing is an asset for industrial organizations. These assets play a key role in global competition. Especially in increasing the innovation capacity of Small and Medium Industries (IKM). In this case innovation means introducing new products, making qualitative changes to existing products, introducing new processes in industrial organizations, creating new markets, and developing new sources of raw materials or other inputs. Much knowledge is stored in individuals, which is called tacit knowledge. Sharing tacit knowledge among individuals associated with industry organizations can increase the capacity of innovation previously explained. This study analyzes the relationship between sharing tacit knowledge and organizational innovation capabilities. Certain SMI employees located in Semarang, Central Java were the respondents for this study. Opinions as many as 45 members of each IKM have been analyzed using the hypothesis testing method. Through this research, it is shown that the level of sharing of tacit knowledge influences IKM's innovation ability.

## 1. INTRODUCTION

Innovation is an important indicator for organizations to survive in increasingly fierce economic competition. In an effort to improve its capabilities, organizations must create an innovation, such as product innovation, methods, or market share. Individual factors play an important role and have a strong correlation with organizational innovation. Knowledge is the dominant factor in the production process to add value to the organization's output. The definition of knowledge is something unique like information and data.

The capability of organizational innovation has a positive impact on organizational business performance (Huhtala et al., 2014) and competitive advantage (Ologbo et al., 2015). Organizational innovation capability is formed from the innovation capabilities of individuals in the organization. The ability of individuals to continue to innovate in order to improve products, services, and work systems, is important for organizations (Ologbo et al., 2015).

Individual knowledge is converted into new products and services or modified products and services (Li et al., 2006). Knowledge can be divided into two parts, namely individual knowledge that can be formally dispersed (explicit knowledge), for example: financial reports and human resource data, and individual knowledge that is difficult to communicate (tacit knowledge), for example: work experience, skills, and information knowledge. Organizations need to focus on tacit knowledge in the product development process. This focus can target knowledge management systems in an organization, so that knowledge that is difficult to communicate (tacit knowledge) especially individual tacit knowledge can be developed to create innovative organizations.

Economic situation nowadays, competition between organizations is getting tougher. This situation is characterized by a strong correlation between economic growth and innovation. Innovation is an important factor for organizations to produce high quality products that are suitable for customer needs (Rumanti et al., 2012). There are several theories that identify the meaning of innovation. There are several types of innovation, namely: (1) introducing new products and qualitative changes to current products, (2) introducing new processes into the industry, (3) creating new markets, (4) developing new sources

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of raw materials or other inputs, and (5) changes in industrial organizations. Innovation not only creates new things but also creates levels between one entity and the previous version (Kukkonen et al., 2003).

Business challenges are becoming increasingly difficult now, because markets and consumers demand high-quality products and services at competitive prices. However, the unstable economic condition of Indonesia has made purchasing power of most Indonesians still low. To survive, organizations are required to increase their effectiveness and efficiency in every factor of their business activities so that they can reach their targets. In addition, organizations must develop and create innovations related to their products and services.

In order to improve their ability to meet their targets and to meet market demands, SMI must adapt their business concepts to be able to compete. To be able to compete, traditional business concepts mainly focus on optimizing physical facilities. The concept is not yet in line with the challenges of today's global business. In addition to physical facilities, human resources have become important factors to consider; especially individual intellectual capacity. SMI must manage their knowledge accurately.

## 2. RESEARCH METHODOLOGY

### 2.1 Tacit Knowledge Sharing

Tacit knowledge lies with each individual. Individual tacit knowledge is an introduction that is difficult to articulate. Tacit knowledge has a relationship with the creation of an innovation, including on an organizational scale. Individual tacit knowledge supports the creation of an innovation, especially if it can be articulated well. Today in the era of knowledge-based economics, many organizations recognize the importance of implementing knowledge management (Dalkir, 2011). Moustaghfir and Schiuma in 2013 said that knowledge sharing is seen as a social process through the involvement of individuals in activities to gain new knowledge and then transform it into new capabilities and opportunities to innovate and achieve competitive advantage (Karlsson and Rodrigez, 2015). In sharing knowledge, knowledge exchange occurs between individuals, teams, and organizations. Knowledge exchange can occur naturally and be structured or organized. The focus on sharing knowledge is on human resources and interactions that occur within it (Gumus, 2007). Tacit knowledge is knowledge that cannot be codified, because it is based primarily on individual experience. In the organizational context, this knowledge consists in part of technical skills and partly from cognitive dimensions such as personal perspectives, beliefs, and mental models. Knowledge sharing is defined as the distribution of knowledge in organizations by individual members of the organization, in terms of procedures and work practices. The forms of knowledge that are shared throughout the organization can be ideas, experience, work skills, or expertise (Kurniawati, 2016). Knowledge sharing is mainly influenced by three cultural values (Borges et al., 2012):

a. sense of collaboration between organizational members and collaboration in organizational activities;
b. recognition of employees to share knowledge; and employee trust in team work and trust in team abilities.

### 2.2 Individual Innovation Capabilities

Employee innovation capability is defined as that the propensity of employees to generate new ideas, promote these new ideas and implement these new ideas to achieve organizational goals (Ologbo et al., 2015). Innovation is very important for the success and survival of the company. Innovation is a process when companies identify their own problems and get new solutions through new knowledge to solve problems (Auernhammer, et al., 2001). The main reason for doing an innovation is to build market share and ensure or increase the profitability of the organization to protect the company's independence in the future. Innovation occurs when ideas are implemented successfully in practice / adoption (Koskinen, 2003). The adoption process is a must for organizations to maintain the continuity of the innovation process.

Innovation capability is the ability of companies to generate new ideas for the development of their products and services to achieve better organizational performance and competitive advantage (Ologbo et al., 2015). Individual innovation capabality is the ability that is measured individually to develop new products that can satisfy market needs, apply more appropriate technological processes to produce new products, develop and adopt new products by responding to technological changes to win competition (Ussahawanitchakit, 2007). Individual innovation capabilities are abilities that are measured individually to develop new ones. products that meet market needs, implement more appropriate technological processes, adopt new products and respond to future technology development activities (Rumanti and Hidayat, 2014). Individual innovation capabilities consist of four dimensions, namely experience, situation, technological and knowledge changes. Experience is an insight held by

individuals or groups based on their ability to adopt external influences. The situation is a condition that occurs in the work environment. The dimension of technological change is the development of old ways or the discovery of new methods in solving problems that arise continuously. While the knowledge dimension in this construction explains specific and scientific things, both those that are attached to individuals and groups based on their experiences (Rumanti and Hidayat, 2014).

### 2.3 Tacit Knowledge Sharing and Individual Innovation Capabilities

The ability of innovation is examined at the individual level rather than the organization as a whole. This is because individual employees play an important role in the ongoing process of innovation from the whole working group and organization in general. Innovative work groups and innovative work groups (Ologbo et al., 2015). In this study, the ability of innovation is examined as an individual known as employee innovation capability. Capability is routine or practice that allows employees or organizations to use their resources efficiently to achieve certain goals.

### 2.4 Model and Hypothesis in Reseach

In this study there are two variables that influence tacit knowledge sharing, namely organizational factors (Kurniawati, 2010) and individual factors (Kurniawati, 2016). Organizational factors involved in this research are organization structure, employee training, top management support, organizational reward and organizational culture, while those involved in individual factors are tacit knowedge sharing provider and tacit knowledge receiver. Both of these variables are enablers for tacit knowledge sharing, which consists of two dimensions, namely collecting and donating. The next variable involved in this study is an individual innovation capability that has four dimensions namely experience, technology changes, situation and knowledge (Rumanti and Hidayat, 2014). In this stage, the preparation of hypotheses related to the research, in which hypotheses are compiled it is useful to know whether there is a relationship between endogenous variables or constructs included in this study. In Figure 1 shown that the research model have two constructs, there are constructs endogenous and exogenous. Constructs endogenous consists of organizational fantors, individual factors, tacit knowledge sharing dan individual innovation capabilities.

Previous research papers address the knowledge sharing process and the main factors that affect it as well as the factors that play a role of individual innovation capability. Based on the theory of some of these studies, the hypothesis for this study regarding the application of the tacit knowledge sharing to the individual innovation capability can be built. The hypotheses of this study from research model are:

$H_1$: Individual factors effect on the tacit knowledge sharing
$H_2$: Organizational factors effect on the tacit knowledge sharing
$H_3$: Tacit knowledge sharing has effect on the individual innovation capability

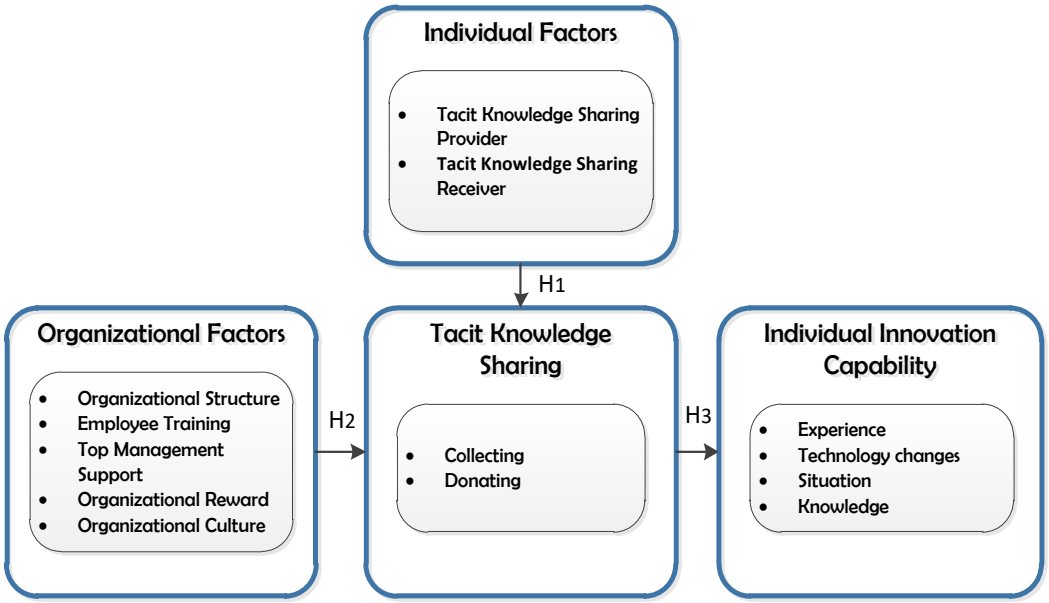


**Figure 1.**
Relationship among variables model

### 2.5 Research Strategy

A case study was conducted for this study. Analysis is carried out on individuals working in small and medium industries. Respondents in this study are *Small and Medium Industries* (IKM) located in Semarang, Central Java. Respondents in this study were a population of 45 members each from the SMI, who were employees of the SMI.

## 3. RESULTS AND ANALYSIS

The result of data collection and processing using software Smart PLS 3.0. The data processing result shown in Table 1. Based on data processing using Smart PLS 3.0 software presented in Table 2 and Table 3, it is known that all hypotheses in this research model can be accepted or proven.

Form all the data computation, there some suggestion and recommendation for the organization:

a. An organization need concern to tacit knowledge sharing because knowledge is the core of the innovation process in the organization and knowledge will be valued only through individual innovation capabilities.
b. Individual innovation capability needs to be supported by organizational management, because it is a factor that determines the success of innovation in organizations is the process of sharing knowledge secretly
c. Variables or indicators that have significant value for each exogenous construction are a picture for IKM owners to improve organizational innovation capabilities with the ability to innovate every individual involved.

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**Tabel 1.**
Item-total statistic

| Construct Endogen | Construct Exogenous | AVE | Composite Reliability | T-Statistic | Significantly |
|---|---|---|---|---|---|
| Organizational Factors (OF) | Organizational Structure | 0.877 | 0.945 | 16.984 | √ |
| | Employee Training | 0.885 | 0.934 | 12.566 | √ |
| | Top Management Support | 0.908 | 0.899 | 9.087 | √ |
| | Organizational Reward | 0.675 | 0.923 | 10.346 | √ |
| | Organizational Culture | 0.739 | 0.804 | 9.905 | √ |
| Individual Factors (IF) | Tacit Knowledge Sharing Provider | 0.905 | 0.956 | 15.874 | √ |
| | Tacit Knowledge Sharing Receiver | 0.899 | 0.993 | 14.677 | √ |
| Tacit Knowledge Sharing (TSK) | Collecting | 0.966 | 0.875 | 9.566 | √ |
| | Donating | 0.894 | 0.932 | 11.756 | √ |
| Individual Innovation Capability (IIC) | Experience | 0.888 | 0.976 | 10.567 | √ |
| | Technology changes | 0.956 | 0.956 | 9.234 | √ |
| | Situation | 0.854 | 0.804 | 8.345 | √ |
| | Knowledge | 0.689 | 0.993 | 14.788 | √ |

**Table 2.**
Determinant ($R^2$)

| | R Square |
|---|---|
| Organizational Factor (OF) | 0.819 |
| Individual Factor (IF) | 0.818 |
| Tacit Knowledge Sharing (TKS) | 0.752 |
| Individual Innovation Capability (IIC) | 0.756 |

**Table 3.**
Significance of Structural Relations

| Hypothesis | | Path Coefficient | T-Statistic | P-Values | Conclusion |
|---|---|---|---|---|---|
| $H_1$ | OF → TKS | 0.765 | 9.273 | 0.0007 | Accepted |
| $H_2$ | IF → TKS | 0.624 | 8.505 | 0.0005 | Accepted |
| $H_3$ | TKS → IIC | 0.810 | 10.267 | 0.0010 | Accepted |

## 4. CONCLUSIONS

Based on the analysis, the conclusions are:

1. Individual factors effect on the tacit knowledge sharing and the indicators that affect the individual factors the most is tacit knowledge sharing provider.
2. Organizational factors effect on the tacit knowledge sharing and the indicators that affect the organizational factors the most is top management support.
3. Tacit knowledge sharing has effect on the individual innovation capability
4. The indicators that affect the tacit knowledg e sharing the most is collecting.
5. The indicators that affect the individual innovation capability the most is technology changes

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